Product Data Sheet

DuPont™ Specialty Membrane XUS180804 and XUS180802 Reverse Osmosis Elements

Ultra-High Pressure, High-Rejection, Reverse Osmosis Elements for Industrial Water Purification

Description

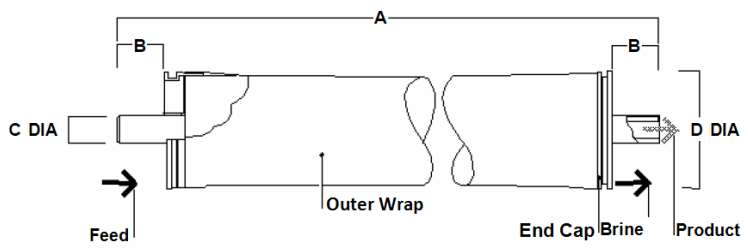
The DuPont™ XUS180804 and XUS180802 Reverse Osmosis Elements are ultra-high pressure elements offering an industry wide distinct combination of features:

- Up to 120 bar (1,740 psi), ultra-high feed pressure capability due to distinct element and membrane design
- Increasing the overall efficiency of Zero-Liquid-Discharge (ZLD) by achieving very high solute concentrations thus helping to reduce the size of downstream thermal treatment
- Excellent for recovery of salts in process streams
- Robust FilmTec™ reverse osmosis (RO) membrane sheet;
- 34 mil feed spacer to lessen the impact of fouling on the pressure drop across a vessel and to enhance cleaning effectiveness.

Typical Properties

DuPont™ Specialty Membrane	Active Area (ft^2)	Active Area (m^2)	Feed Spacer Thickness (mil)	Minimum ATD OD (in.)	ATD included
XUS180804	73	6.8	34	3.9	Yes
XUS180802	22	2.0	34	2.5	Yes

Element Dimensions



DuPont™ Specialty Membranes	A (in.)	A (mm)	B (in.)	B (mm)	C (in.)	C (mm)	D (in.)	D (mm)
XUS180804	40.0	1,016	1.03	26	0.75 OD	19 OD	3.9	99
XUS180802	40.0	1,016	1.03	26	0.75 OD	19 OD	2.4	63.5

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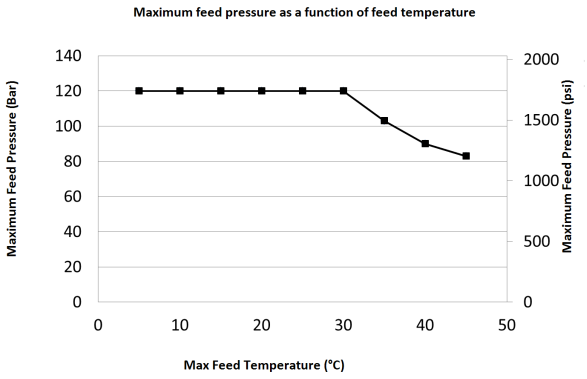
Operating and Cleaning Limits

Maximum Operating Temperature [a, d]	113°F (45°C)
Maximum Operating Pressure at 30°C[d]	1,740 psig (120 bar)
Maximum Element Pressure Drop	15 psig (1.0 bar)
pH Range	
Continuous Operation [a]	2 – 11
Short-Term Cleaning (30 min.) [b]	1 – 13
Maximum Feed Silt Density Index (SDI)	SDI 5
Free Chlorine Tolerance [c]	< 0.1 ppm

a. Maximum temperature for continuous operation above pH 10 is 95°F (35°C).
b. Refer to guidelines in Cleaning Guidelines (Form No. 45-D01696-en) for more information.
c. Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty, DuPont Water Solutions recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater (Form No. 45-D01569-en) for more information.
d. Relation between maximum allowed feed pressure and maximum feed temperature see below



Temperature	Pressure	
°C	bar	psi
5	120	1,740
10	120	1,740
15	120	1,740
20	120	1,740
25	120	1,740
30	120	1,740
35	103	1,494
40	90	1,305
45	83	1,200

Clean in Place (CIP) Parameters

Maximum CIP Pressure	15 to 75 psi (1 to 5 bar)
pH Range, Cleaning (< 45°C)	pH1 – pH13
Hydrogen Peroxide Limit, Short-Term Cleaning	1,000 ppm

1. Refer to Cleaning Guidelines (Form No. 45-D01696-en).
2. Under certain conditions, the presence of free chlorine and other oxidizing agents will cause premature membrane failure. Since oxidation damage is not covered under warranty. FilmTec™ recommends removing residual free chlorine by pretreatment prior to membrane exposure. Please refer to Dechlorinating Feedwater (Form No. 45-D01569-en) for more information.

Important Start-Up Information

Normally, new elements are cleaned prior to initial use. The cleaning procedure should be based on the application for which the elements are to be used. If cleaning with formulated agents is not available, an alkaline wash with a wetting agent is recommended prior to initial use. Please refer to the FilmTec™ Reverse Osmosis Membranes Technical Manual (Form No. 45-D01504-en) for more information.

Avoid any abrupt pressure or cross flow variations on the spiral elements during start-up, shutdown, cleaning or other sequences to prevent possible membrane damage. During startup, a gradual change from a standstill to operating state is recommended as follows:

- Feed pressure should be increased gradually over a 30-60 second time frame.
- Before initiating cross-flow at high permeate flux conditions (e.g., start-up with high temperature water), the set operating pressure should be maintained for 5-10 minutes.
- Cross-flow velocity at set operating point should be achieved gradually over 15-20 seconds.
- Avoid permeate-side backpressure at all times.

General Information

- Keep elements moist at all times after initial wetting.
- To control the spread of biological growth during system shutdowns, it is recommended that elements be immersed in a preservative solution.

Warranty Information

Reference warranty document: DuPont™ Specialty Membrane Prorated Element Warranty.

Before use or storage, review these additional resources for important information:

Product Stewardship

DuPont has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with DuPont products—from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

DuPont strongly encourages its customers to review both their manufacturing processes and their applications of DuPont products from the standpoint of human health and environmental quality to ensure that DuPont products are not used in ways for which they are not intended or tested. DuPont personnel are available to answer your questions and to provide reasonable technical support. DuPont product literature, including safety data sheets, should be consulted prior to use of DuPont products. Current safety data sheets are available from DuPont.

Please be aware of the following:

- The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.
- Any concentrate or permeate obtained from the first hour of operation should be discarded.

Regulatory Note

This product may be subject to drinking water application restrictions in some countries; please check the application status before use and sale.

Have a question? Contact us at:

www.dupont.com/water/contact-us

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